REMARKS

Claims 1-15 and 45-64 are pending. Applicants note with appreciation that Claims 8, 9 and 62 would be allowable if the objection is ovecome.

35 U.S.C. §102 (e) Rejection

Claims 1-5, 10, 12-15, 45, 46-59 and 64 are rejected under 35 U.S.C. 102(e) as allegedly being anticipated by Zang et al (US 2003/0207963 A1). Applicants respectfully disagree with the Examiner because Zang et al do not disclose all the elements of the claims.

Claim 1 is directed to non-aqueous electrophoretic capsules comprising a halogenated polymeric shell and an electrophoretic composition enclosed therein wherein said electrophoretic composition comprises charged pigment particles or pigment-containing microparticles dispersed in a dielectric solvent. Zang et al only disclose a component of the claim, i.e. pigment-containing microparticles.

Zang et al, disclose microparticles that enclose pigment particles. Contrary to the present invention, the hard shell of Zang only encloses pigment particles and does not enclose a dielectric solvent. In other words, the hard shell of Zang does not enclose an electrophoretic composition.

The non-aqueous electrophoretic capsules of the present invention act as display cells because they comprise not only a halogenated polymeric shell but also an electrophoretic composition enclosed therein. Whereas the pigment-containing microparticles of Zang cannot act as display cells, and can only be a component of a display cell. The pigment-containing microparticles of Zang, when dispersed in a dielectric solvent, form an electrophoretic composition, which is only part of the internal phase of the process of the present invention.

The non-aqueous capsules of the present invention are prepared by microencapsulation process involving an internal phase and an external phase. The internal phase comprises (a) charged pigment particles or pigment-containing microparticles, (b) a dielectric solvent or solvent mixture, (c) a shell-forming halogenated monomer or oligomer, and other optional additives (see Section I of the application). The external phase comprises (i) an organic solvent, (ii) a complementary chain extender or crosslinker, and other optional additives (see Section II). To form the non-aqueous electrophoretic capsules, the internal phase is emulsified into the

external phase. As a result, the internal phase comprising charged pigment particles or pigment-containing microparticles dispersed in a dielectric solvent is enclosed within a halogenated polymeric shell. The halogenated polymeric shell is formed by interfacial polymerization/crosslinking between the halogenated shell-forming monomer or oligomer from the internal phase and the complementary chain extender or crosslinker from the external phase (see Section III).

The pigment-containing microcapsules of Zang are prepared according to paragraph [0029] of Zang.

In summary, it is clear that the pigment-containing microparticles of Zang et al are entirely different from the non-aqueous electrophoretic capsules of the present invention, because of the difference in components of each composition and the difference in the preparation methods.

This discussion also applies to independent Claim 45 and claims dependent from Claims 1 and 45.

In the Office Action, the Examiner cites Figure 3 and Table 1 of Zang. Applicants respectfully submit that there is no Figure 3 or Table 1 of Zang; thus Applicants cannot specifically rebut the Examiner's statements.

35 U.S.C. §103 Rejection

Claims 6, 7, 60 and 61 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Zang et al in view of Rao et al (US Patent No. 6,372,838). The rejection is traversed.

The reference to US Patent No. 6,262,833 (in the parenthesis after Zang et al in the Office action) appears to be an error as the Office Action only refers to the content of Zang et al.

As discussed above, the primary reference Zang et al do not teach or suggest the non-aqueous capsules of the present invention. The addition of Rao et al does not cure the deficiency.

The subject matter of Rao et al is different from the present invention in many aspects. First of all, Rao et al relate to latex particles formed in a fluorinated solvent. The latex particles are formed in two steps. The first step involves polymerizing a mixture of 1-2 parts by weight of one or more non-fluorinated free-radically-polymerizable monomers and 1-9 parts by weight of one or more highly fluorinated macromers terminated at one or more sites with free-radically-

polymerizable groups to form a dispersion of seed particles and the second step involves polymerizing the seed particles formed in the first step with additional one or more non-fluorinated free-radically-polymerizable monomers. The latex particles formed in the fluorinated solvent may function as an electrophoretic composition. However, Rao et al disclose that the latex composition is directly held between two electrodes in an electrophoretic display (see column 6, lines 12-24). Rao et al do not disclose or in any way suggest that the latex composition be encapsulated in electrophoretic capsules, let alone non-aqueous electrophoretic capsules comprising a halogenated polymeric shell.

Therefore, Rao et al do not add anything to Zang et al which would render the present invention obvious.

Claims 11 and 63 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Zang et al in view of Jacobson et al (US Patent No. 6,323,989). The rejection is traversed.

As discussed above, the primary reference Zang et al do not teach or suggest the non-aqueous capsules of the present invention. The addition of Jacobson et al does not cure the deficiency.

Jacobson et al disclose a nanoparticle-containing electrophoretic fluid which may be encapsulated in capsules. According to Jacobson et al, the capsules may be formed by any conventional encapsulation technique (see column 19, lines 49-50). The nanoparticle-containing electrophoretic fluid may also be directly dispersed or emulsified into a binder (or a precursor to a binder material) (see column 20, lines 24-33). The reference does not disclose or in any way suggest non-aqueous electrophoretic capsules having a halogenated polymeric shell or how such capsules may be prepared.

Therefore Jacobson et al do not add anything to Zang et al which would render the present invention obvious.

CONCLUSION

Applicants believe that the application is now in good and proper condition for allowance. Early notification of allowance is earnestly solicited.

Respectfully submitted,

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Viola T. Kung (Reg. No. 41,131)

HOWREY LLP
2941 Fairview Park Drive, Box 7
Falls Church, VA 22042
Ph. (650) 798-3570